

Title (en)

Patterning process using EB or EUV lithography

Title (de)

Strukturierungsverfahren mittels EB- oder EUV-Lithographie

Title (fr)

Procédé de formation de motifs utilisant la lithographie par faisceau d'électrons ou par EUV

Publication

EP 2360527 A1 20110824 (EN)

Application

EP 11001082 A 20110210

Priority

JP 2010031030 A 20100216

Abstract (en)

A chemically amplified positive resist composition for EB or EUV lithography is provided comprising (A) a polymer or a blend of polymers wherein a film of the polymer or polymer blend is insoluble in alkaline developer, but turns soluble under the action of acid, (B) an acid generator, (C) a basic compound, and (D) a solvent. The basic compound (C) is a polymer comprising recurring units bearing a side chain having a secondary or tertiary amine structure as a basic active site and constitutes a part or the entirety of the polymer or polymers as component (A).

IPC 8 full level

G03F 7/039 (2006.01); **C08F 212/02** (2006.01); **C08F 220/30** (2006.01); **C08F 220/34** (2006.01); **G03F 7/004** (2006.01); **H01L 21/027** (2006.01)

CPC (source: EP KR US)

G03F 7/004 (2013.01 - KR); **G03F 7/0045** (2013.01 - KR); **G03F 7/0392** (2013.01 - EP KR US); **G03F 7/0395** (2013.01 - EP KR US); **G03F 7/0397** (2013.01 - EP KR US); **H01L 21/027** (2013.01 - KR); **H01L 21/0271** (2013.01 - KR); **Y02P 20/55** (2015.11 - EP)

Citation (applicant)

- JP 2008095009 A 20080424 - SHINETSU CHEMICAL CO
- JP 2007114728 A 20070510 - SHINETSU CHEMICAL CO
- JP 2008133312 A 20080612 - MITSUBISHI RAYON CO
- JP 2009086310 A 20090423 - FUJIFILM CORP
- JP H07319155 A 19951208 - WAKO PURE CHEM IND LTD, et al
- JP 2009263487 A 20091112 - SHINETSU CHEMICAL CO
- JP 2008102383 A 20080501 - SHINETSU CHEMICAL CO
- JP 2004115630 A 20040415 - SHINETSU CHEMICAL CO
- JP 2005008766 A 20050113 - SHINETSU CHEMICAL CO

Citation (search report)

- [XD] JP 2008133312 A 20080612 - MITSUBISHI RAYON CO
- [X] US 5939242 A 19990817 - TANG QIAN [CH], et al
- [X] EP 1698937 A2 20060906 - FUJI PHOTO FILM CO LTD [JP]
- [X] US 6242153 B1 20010605 - SATO KENICHIRO [JP], et al
- [A] US 2009317739 A1 20091224 - THIYAGARAJAN MUTHIAH [US], et al
- [A] EP 1775632 A1 20070418 - THINK LABS KK [JP]

Cited by

EP2955576A1; EP3163374A1; US10534262B2; US9519217B2

Designated contracting state (EPC)

AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO RS SE SI SK SM TR

Designated extension state (EPC)

BA ME

DOCDB simple family (publication)

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DOCDB simple family (application)

EP 11001082 A 20110210; CN 201110121500 A 20110216; CN 201410505727 A 20110216; JP 2011016371 A 20110128; KR 20110013205 A 20110215; KR 20160152710 A 20161116; TW 100104906 A 20110215; US 201113027356 A 20110215